(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification⁷: G06F 17/00

(21) International Application Number: PCT/GB00/02707

(22) International Filing Date: 19 July 2000 (19.07.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
9916953.4   20 July 1999 (20.07.1999)   GB

(71) Applicant and
(72) Inventor: JONES, John [GB/GB]; 16 High Meadows, Romiley, Stockport SK6 4PT (GB).

(74) Agents: QUEST, Barry et al.; Wilson Gunn M'Caw, 41-51 Royal Exchange, Cross Street, Manchester M2 7BD (GB).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:
—   Without international search report and to be republished upon receipt of that report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: NETWORK TRANSACTIONS
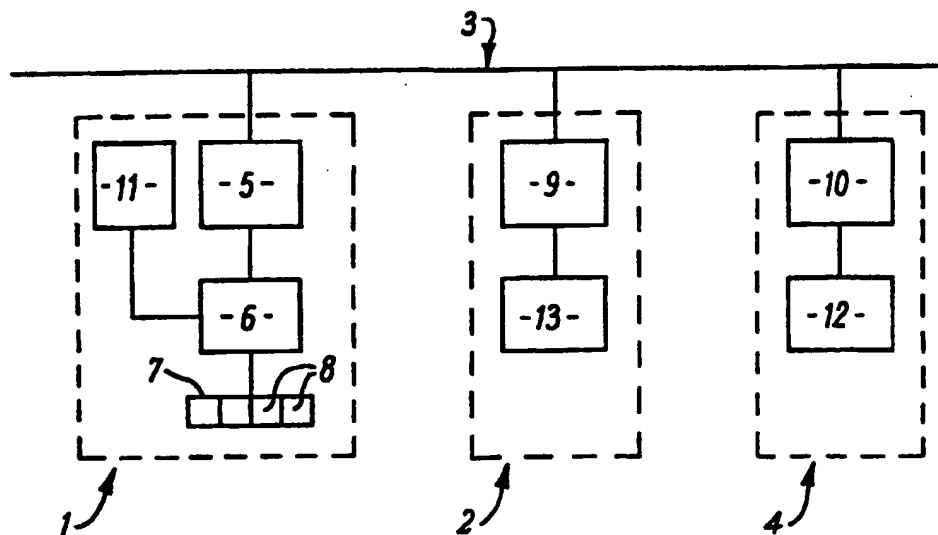
(57) Abstract: Network transactions, particularly between users and web sites on the Internet World Wide Web, are facilitated by matching user profiles with web site code masks, so that the user is supplied with targeted, personnalised information without breaching the user's privacy. The user profile may be established using software (6) on the user's Internet access PC (5), and the matching with web sites (10) may be carried out at an Internet search engine (9).

-1-

NETWORK TRANSACTIONS

This invention relates to transactions on networks and is particularly although not exclusively concerned with a technique of facilitating contact between users and resources on the 'World Wide Web' (WWW) of the Internet.

The WWW is widely used for providing information resources for users concerning products and services. Providers of such resources wish to target potentially interested users and users would benefit from a personalised service rather than indiscriminate information which may contain much which is not of any interest. However, users generally wish to maintain their privacy and there is therefore the problem of providing a satisfactory personalised experience without breaching privacy.

The design of the WWW is such that it puts the authority and power for finding information into the users' hands. It is in effect a 'pull' approach to information research. Users pull to themselves the data they seek, when they are ready to seek it.

Traditional marketing relies upon 'push' techniques: messages are 'pushed' in front of targeted persons. However, users are generally cautious about revealing their identities on the WWW and, equally, are generally averse to receiving unsolicited contacts through this medium.

Accordingly, suppliers experience difficulty in achieving adequate promotion of their goods and services through the WWW, and users often

-2-

experience frustration in trying to find relevant suppliers.

A targeted service could be provided using a centralised database of users registered with the service but this has problems of acceptability in so far as many users have considerable reservations about having

5   personalised information available on databases. In addition to general sensitivity as to disclosure of confidential or private information, there tend to be concerns about matters such as: verification of data to ensure that it is correct and up to date; control over ownership of data in so far as the database may be sold or rented or shared or pass into other hands due to

10   company reorganisations, etc; control over use of the data in that data provided for one purpose may be passed for use for another purpose; accountability in that it may be difficult to determine who is responsible for use of data thereby rendering difficult rectification of any abuse occurring; and cross-border issues in so far as data may be collected in one jurisdiction

15   and used in another giving rise to problems or at least uncertainty as to which legal controls if any apply to different uses.

An object of the present invention is to provide a technique to facilitate transactions on networks whereby in particular suppliers can provide personalised services to targeted users on the WWW without

20   compromising the privacy of the users.

According to the invention therefore there is provided a method of facilitating contact between one more resources and users on a network

-3-

wherein personal profiles are allocated to the users, the or each of the said

resources has a code, and at least one said code is matched with a

predetermined said profile thereby to effect contact between the or each

resource and the or each user associated with the said matched code and

5   profile.

With this arrangement targeted contact can be achieved on the basis

of a matched code and profile and, in so far as the profiles need not be

such as to provide precise personal identification, and also need not be

centrally stored or listed in their entirety, the privacy of users need not be

10   compromised.

The method of the invention may be applied to any suitable kind of

network used for any suitable purpose. However, it is visualised that the

invention will find particular application in the context of the Internet and

particularly the WWW whereby the method of the invention may be utilised

15   to facilitate contact between web sites and Internet users.

Thus, the technique of the invention can enable the owners of

commercial web sites to implement a desired 'pull' marketing strategy

adapted to the special environment of the WWW. There is the possibility

of providing highly targeted routing of individuals to web site information

20   which has personal relevance to them. There is also the possibility of

tailoring information to the requirements of users whereby for example a

message or offer can be adjusted for different users dependent on their

-4-

profiles.

These benefits can be achieved without requiring complete user identification or a central register of comprehensive personal data whereby precise targeting of individuals can be attained without undue risk of commercial, political or social abuse.

In particular, the said user profiles preferably contain general data of a generic or category or demographic nature of a kind which is common to a plurality of people, particularly to a large number of people, and does not include data of a personal identity or specific nature which is unique to one or a very small number of individuals or which is capable of uniquely identifying any individual. Accordingly, the data may include one or more of general personal attributes such as sex, age band, etc, but not specific attributes such as name, address, social security number, etc.

Preferably also a user's profile is not stored within the network beyond network equipment which is under the control of the user. In particular, the profile may be generated for use and not subsequently stored, or it may be stored only in the user's own personal or local PC or other equipment and not in any remote database outside the control of the user. The invention is not however restricted to this mode of storage in so far as the profile does not identify the user and in some cases it may therefore be acceptable to store the profile at least partially on a remote database of the network, for example on an Internet web site or search

-5-

engine from where it can be retrieved for use as required preferably under

the sole control of the user by entry of a user name or password or the like.

Also, the profile may be stored on a distributed database basis whereby

different parts of the profile are stored at different locations e.g. part on the

5   user's PC or local Internet access equipment and part on a web site

accessed by the user whereby the complete profile requires assembly from

such parts.

The invention is particularly beneficial in the context of marketing of

commercial products and services. However, the invention is not restricted

10   to this field of application and may be used in relation to the supply of

information for other commercial or non-commercial purposes. The

invention also can be used to derive statistical information for demographic

surveys, marketing investigations, etc.

The user profiles can be established in any suitable manner. They

15   may be established on a query basis, whereby the user is required to

respond to a number of queries e.g. by entering text into a form, or ticking

boxes or otherwise, and/or on a monitoring or feedback basis whereby

activity of the user e.g. in searching for, or visiting web sites is utilised to

establish or contribute to or modify the profile.

20   The user profile may be established using software on a PC station

or other personal localised equipment used to access the WWW.

Alternatively, the profile may be established directly on a web site using

-6-

e.g. drop down boxes and/or by responding to yes/no statements. An intermediary web site may be used for this whereby for example on accessing a first web site asking for a user to establish a profile the user is then referred to the intermediary site for this purpose thereby to facilitate

5   security. The profile is preferably stored in the user's personal localised WWW access equipment so that it can be retrieved automatically or under the control of the user for use as and when required e.g. using clipboard and paste techniques.

Most preferably, the user profile represents multiple personal

10   attributes and thus may be in the form of a data set made up of individual data items or nuggets representing different personal attributes of the user.

A limited set of nugget attributes can be set directly from a web site and stored in a user's web browser in the manner of 'cookies'. Provision may be made for the user to examine and change or delete these on-line or

15   otherwise. The cookie may relate to data of a relatively highly personal nature so that e.g. when the user connects to a web site it is personalised automatically by use of the cookie to the user. The user may have the option of maintaining different profiles e.g. as different identities on a browser selectable at will.

20   The data set of the user profile may be organised as a data 'image' of the user comprising a number of characteristics each having sub-sets of data or 'nuggets' associated with the respective characteristic and relating

-7-

to a single personal attribute.

There may be any number of characteristics, although 32 is a particularly convenient number which is capable of fully defining an individual in practice. The characteristics may each have 16 attributes each

5   of which may have up to 16 different possible states. For each of the 32x16 attributes there may be a fixed attribute identifier and a variable which identifies the attribute state of the particular user. By way of example, one characteristic may be 'physical' and the associated attributes may be 'gender', 'age', 'height', 'weight', etc.

10   The matching between a user profile and a resource code may be initiated and performed in any suitable manner.

A matching intermediary may be provided and, in the context of the Internet, this may be a server incorporating a search engine which operates to match codes of web sites on servers registered with the search engine

15   and profiles of users submitting search requests to the search engine so as to produce a list of matched web site addresses. The search engine may be linked to an activity and/or statistical logging device whereby user access of registered coded web sites and/or profile characteristics can be monitored particularly for revenue-generating purposes. This matching

20   intermediary may be integrated with the aforesaid profile-establishing intermediary web site.

The web site codes may be embedded in the sites on their servers so

-8-

as to be detected on registration and/or may be separately submitted to the search engine as part of the registration process.

The invention is not restricted to the use of an intermediary search engine which acts to effect matching and then directs the user to the appropriate web site or sites. Alternatively or additionally it is possible for matching to be effected, in the context of the Internet, after a user has made contact with a web site, the matching then having the effect of tailoring or otherwise influencing contact with the web site such that for example the user is directed to a particular section of the web site or information from the web site is presented to the user in a particular manner e.g. as a customised web page. This influencing of contact with the web site may be an operational function of the web site itself or it may be a function of a 'broker' intermediary, such as a search engine or other intermediate Internet server whereby the web site provides requirement codes to such intermediate server and the server appropriately customises the web site for different user profiles. This may occur after the user accesses the web site whereby the user is directed to the intermediate server e.g. by a hypertext link and from there appropriately re-accesses the web site directly or within a frame of the intermediate server.

Moreover, in the case where a search engine or other intermediary is used to match codes and profiles this need not require understanding of special codes and profiles by the search engine. Instead it is possible to use

-9-

an arrangement whereby the codes and profiles are interpreted in a form

corresponding to that already used for other searching operations by the

search engine. Thus, by way of example, the code may be incorporated as

words in the usual metatag or HTML code of a web site so as to be indexed

5   in the usual way by a search engine, and a search request using a profile

may have the profile converted to similar words for use by the search

engine. In this way a conventional search engine can be caused to act, at

least to a certain extent, as a matching intermediary in accordance with the

present invention.

10   A matching operation may be effected using disclosure levels of

profile data. Thus, for example, the profile may contain data in different

groups. These groups may be respectively individual ones, or clusters of

the above mentioned characteristics.

By way of example, one data group may relate to 'public' data - such

15   as physical attributes e.g. gender, age, height, etc. In a preferred

embodiment this data may be in two separate forms: one in special format

only recognisable by a dedicated matching operation and the other being in

a format recognisable by a conventional search engine to provide a degree

of personalisation on the search engine.

20   A second data group may relate to 'private' data namely attributes of

a more personal nature such as attributes of the kind which can be

determined in a personal conversation between associates, casual friends,

-10-

or commercial transactions where they are of direct relevance to the desired
outcome.

A third data group may relate to 'controlled' data, namely attributes
such as would be revealed to a close friend, family member or professional
5   adviser.

Matching can be effected using masks with two operating states
relating to 'catalogues' and 'reflections'. A 'catalogue' is a database of
'targets' and each 'target' in the database is a collection of data relating to
attributes relevant to that target. For example, a target may be 'personal
10   clothing' and the associated attributes may be height, weight, build,
personal taste, etc. With this example a user and supplier both concerned
with supply of clothing can be appropriately matched so that the supplier
targets a person looking for clothing of the kind available from the supplier.

The masks used may be predetermined templates or may be specified
15   as required, for example using CGI scripting to specify the required
combination of attributes. The matching of a user's profile and a resource
code using a mask may be such that a match is achieved when mask
parameters are met to a predetermined extent or within a predetermined
range. By way of example, a mask could specify: 'match reflections in
20   records for shoes in the formal wear catalogue in which the fit is 60% or
better with gender and age with appropriate gender orientation while
maximising correlation of height, weight, build and self image'. In this case

-11-

any records which do not match the 'and' criteria are ignored and those which do match are organised into a priority list with those suppliers closest to the users' profiles at the head of the list and anything less than 60% correlation ignored.

With this matching arrangement, the supplier does not directly contact any user. The supplier associates profile 'reflections' to entries in its supply 'catalogue'. When a user accesses the catalogue the user is matched to the catalogue entry or entries which correlate with that user's reflection. These correlations may be broad or narrow. For example, if the supplier wishes to target the entire 'baby boomer' generation for certain catalogue entries, these entries would have associated therewith profile reflections having the three age bands spanning this period. A reflection may specify a single 'virtual' person or alternatively a group of virtual people with overlapping personal characteristics. Thus, the reflection could specify 'every baby boomer' with a particular income band and colour preferences.

There may be any number of catalogue entries, say 100, each of which may define a broad goal. The broad goal might be say 'an adventure holiday' and, if a keyword search is being carried whereby for example the user can specify say 'rafting in Africa', the matching process would result in identification of an adventure holiday relating to rafting in Africa matched to the specified user's profile.

-12-

The use of 'catalogues' and masks for matching purposes may be effected at the Internet web site or at the 'broker' intermediate mentioned above.

Hierarchical subdivision into catalogue entries and possible subsequent use of keywords as mentioned above helps minimise computational intensity in effecting matching in so far as correlation of catalogue entry and keywords has to be achieved before moving on to match more detailed profile data; and then the matching operation can be dependent on identification only of specific data ('nuggets') in the user's profile as determined by a matching mask, and also failure of any 'AND' operation can immediately abort further matching so as to curtail computational activity. Thus, the matching may be effected in relation to correlation of the user's profile with codes hierarchically divided within catalogue entries whereby matching is aborted on occurrence of a higher level matching failure within the hierarchy.

Although the invention does not involve storage of any data which specifically identifies any user, it is possible to provide as part of or associated with an established user profile, a code which is unique to the user whilst maintaining the anonymity of the user. This can be used e.g. to personalise a web page or web site presentation for a particular user e.g. such that when the user accesses a web site a web page is produced for that user which provides appropriate matching supply information and

-13-

which also brings up an entry (such as a web site address of a favourite

newspaper) preferred by that user. The unique code is also helpful in

collating demographic or statistical marketing information.

The transactional outcome of contact being established between a

5   user and a resource may take any suitable form. In the context of the

Internet the result may be that the user is directed to a specific web site or

to a specific page on the site. However the result may be a devised or

compiled nature whereby for example an appropriate new web page is

composed and presented to the user, or an existing web page is modified

10   and then presented to the user, or a communication possibility such as an

e-mail message or postal delivery is made available to the user.

As explained, the invention provides benefits for users, whereby the

user can obtain personalised information without breach of privacy. It is to

be understood that the method also provides considerable benefits for the

15   network resources or suppliers in that the supplier is assisted in efficiently

targeting appropriate users. Moreover, a supplier can create profiles of

users without needing to contact the users, without requiring any prior

knowledge of the users, and without needing to hold any personal or private

data. These user profiles can be used, as mentioned, to facilitate user

20   targeting, and also to improve the supplier's knowledge of users' personal

preferences. That is, the supplier can investigate the overall profiles of

users who have made contact with that supplier and use this to derive

-14-

marketing information relating to the general preferences of those users, and also the supplier can establish enhanced profiles by generating additional data, derived from data already held by the supplier, which can be added to the user's profile to be held and subsequently used by that

5   user. For example, marketing investigations might reveal that a user revealing one kind of personal preference, or showing an interest in one product range is also likely to have another kind of personal preference or is likely to be interested in another kind of product, whereby this additional data derived by the supplier can be added to the user's profile for

10   subsequent presentation by that user.

The invention will be described further by way of example only and with reference to the accompanying drawings Figures 1 and 2 which are diagrammatic illustrations of two embodiments of the invention.

Referring to Figure 1, this shows an Internet system comprising a

15   user's localised PC station 1, a remote search engine server 2 connected to the Internet backbone 3, and a remote web site server 4. The user's station 1 has a PC 5 arranged for connection to the Internet 3 in the usual way.

The PC station 1 runs software which includes a profile agent 6. This software 6 establishes a set of data 7 for the user which consists of

20   'nuggets' 8 of information, each nugget representing a predetermined personal attribute.

For example, the attributes may include level of education, nature of

-15-

employment, marital and family status, age range, interests, life style, etc.

The attributes may be determined, at least in the first instance, by requiring the user to respond to queries by entering text answers into a form on the PC, by ticking boxes or otherwise.

5   The data set 7 made up of the attributes 8 determined by the responses to the queries is stored in the user's PC 5 and the software 6 operates to retrieve the data set 7 and put this on the PC's 'clipboard' or other temporary storage ready for use as explained below. The data set 7 may be in the form of a machine generated code, for example a series of

10   numbers each representing a different respective attribute 8 and having a value within a predetermined range indicating the nature or degree of the attribute 8.

The data set 7 may be of predetermined fixed scope and once established may be fixed in memory unless deliberately changed by the

15   user. Alternatively the scope may be user-variable whereby for example the user may have the option of extending or reducing the different attributes, or the ranges of the attributes, which are included in the data set 7.

Also, the data set 7 may change or be completed or extended over time with repeated usage of the profile agent software 6. This repeated

20   usage may arise on a periodic basis or may follow Internet searching, as described hereinafter, whereby the data set 7 is updated in correspondence with use of the data set 7.

-16-

The user's PC station 1 is connected to the Internet 3 and the user can interrogate the selected web search engine database 9 on the remote server 2 in the usual way.　That is, the user can enter a keyword or combination of keywords to find web sites which supply information of interest to the user, such as the web site 10 on the remote server 4.

This procedure involves use of a web browser 11 on the user's PC station 1 and this is linked with the profile agent software 6.

This software linkage prompts the user to supplement his search by appending to the keywords, or entering into a specific supplementary window or box of the web browser 11, the user's profile data set 7.　This is done by a usual mouse click-and-paste operation to cause the data set 7 to be copied from the PC clipboard.

The search engine 9 then carries out a search through its database and produces a URL list of web sites which match both the keywords and also the data set 7.

In the latter respect, a supplier having a web site 10 which it wishes to target at profiled users, incorporates an appropriate profile code or codes 12. The code 12 may be embedded in the web site 10 as stored on the supplier's web server 4, so that the code 12 is extracted by the search engine 9 during classification of the site 10 when the site 10 is registered with the search engine 9. Alternatively or additionally, the code 12 may be notified separately to the search engine 9 during registration.

-17-

The search engine 9 may match the web site 10 with the user's data set 7 on a complete or selective basis. Thus, the matching may require complete correspondence whereby the web site code 12 has to have all of the attributes 8, and the same values for the attributes 8, as the user's data

5   set 7. Alternatively, partial matches, e.g. where only some of the attributes 8 match and/or attributes 8 do not match exactly but are within predetermined ranges, may be permissible. Where partial matching is permissible, this may be predetermined by the search engine 9 and/or may be preset by the user, and the listed results may indicate the degree or

10   nature of matching, e.g. as a percentage or by identifying the matching parameters, so that the user can decide whether or not to follow up the listed sites.

The search engine 9 can incorporate a data log 13 so that it can perform logging and counting operations whereby it is possible to track the

15   numbers of targeted 'hits' on a web site (i.e. the number of times users have accessed web sites found using a profile search). Also statistical data can be derived by processing the attributes of the users in relation to the searches carried out or web sites visited or other factors.

Revenue can be derived by charging the web site owners in relation

20   to logged numbers of visits derived from profile searches and/or by selling statistical information derived from logged attributes.

Whilst the user carries out profile searches, the user profile agent

-18-

software 6 may monitor the searching keywords and protocols used and may utilise this to extend or amend the stored profile and/or the range or nature of queries next to be put to the user in establishing the data set 7.

A profile can be built up which can constitute an extensive and
5   detailed personal analysis of the user, and this can help the search engine 9 in routing the user to those web sites 10 which are likely to be of most interest to the user in the context of the search request posed.

Thus, by way of example, a web site 10 offering financial services may opt to target a consumer having all or most of the attributes of a young
10   family man with a professional job, interested in financial instruments of a certain type, who is risk averse with his assets but enjoys an active outdoor private life. Such a person would therefore be directed selectively to this site 10 (and other similar registered coded sites) on entering a request for sites supplying financial investment services. The site owner can opt to use
15   detailed or broader codes 12 depending on the range of users who are desired to be targeted.

The user may have the option of selecting the parameters of the profile data set 7 as supplied by the user with a search request so that the user can elect to provide tighter or looser sets of data depending on
20   whether the user wishes to achieve a precise searching goal or to browse through a looser set of data to examine a wider field. The user can also opt to reveal progressively more of the profile data during searching. The user

-19-

can also at any time opt not to use the profile data.

With this arrangement, the software 6 helps the user to build up a detailed personal profile which facilitates targeted searching. In effect, personality is added to simple subject matter searches. At the same time,

5   web sites registered as targeted sites with the search engine can be assured that the information supplied will more readily be accessed by those persons who are likely to be interested in the information. Also statistical information of marketing value can be obtained.

Importantly, these benefits are achieved without compromising the

10   privacy of the user.

The profile data set 7 is incomplete in that it does not provide precise identification of the user: it does not include sensitive data such as name and address, nor does it incorporate the IP address of the user's PC or Internet service provider. The profile data is maintained confidential on the

15   user's own PC unless and until the user decides to present the information to the search engine and then the information is only used as stated without revealing the identity of the user.

The technique described is analogous to the technique utilised when a customer enters a shop to negotiate a purchase. The customer may

20   progressively reveal personal information without disclosing his or her identity until a point in the transaction is reached at which the customer is happy to disclose this information.

-20-

The end result is improved searching and access to information for the user, improved marketing for the information supplier, derived statistical usage information, a source of revenue obtainable from site registration, targeted visits and statistical data, and controlled privacy for the user.

Figure 2 shows an alternative Internet system which in many respects is similar to the arrangement of Figure 1 and the same reference numerals are used for the same components.

As with the embodiment of Figure 1, the user establishes a profile-defining set of data 7 using local profile software, although alternatively the set of data 7 may be established using remote software at a web site 14 which by way of example is shown here as an intermediary 'broker' web site associated with the search engine 9. In the latter case, the user would be directed to this web site 14 on accessing the search engine 9 or on accessing an associated profile-using web site, such as the web site 10, to prompt the user to establish a profile on-line, e.g. by entering data with pull-down boxes or the like, which data can then be stored back on the user's PC 5.

The user carries out a search in the usual way employing the search engine 9, with or without entering the profile data 7, and this results in access to the web site 10.

On accessing the web site 10, the user can view the web site information by conventional generalised browsing, on a non- or limited

-21-

personalised basis.

Alternatively the user can choose to search through the site on a fully

personalised basis. If the user implements this choice, the user is directed,

by a hypertext link 15 to the intermediary broker web site 14. This web

5   site 14, accessed by the link 15, calls for the user's profile data 7 and

matches this to requirement codes or masks stored (at 16) within the

web site 14 relating to the web site 10.

The result of this is that the user now views selections made from a

catalogue of products or services on the web site 14 personalised for that

10   user. In practice, the user will see web pages from the site 10 constructed

specially for the user. The user may be linked back to the web site 10 so

as to see those personalised pages at the site 10 or, alternatively, the user

may see the pages within a frame defined at the web site 14.

With this arrangement the matching operations are essentially

15   performed within the server 14. The codes or masks for the web site 10

can be established at the server 14 using templates or with custom

requirements, and the user's profile data can be presented only to the

server 14. This assures the user of privacy and also delegates code or

mask generation and matching procedures to the server 14.

20   It is of course to be understood that the invention is not intended to

be restricted to the details of the above embodiments which are described

by way of example only. Thus, for example, whilst reference is made to

-22-

commercial sites relating to supply of goods or services it is to be

understood that the invention is not restricted to this and the technique of

the invention may be used in relation to the supply of suitable information

on a commercial or non-commercial basis.

-23-

CLAIMS

1.   A method of facilitating contact between one or more resources and

users on a network wherein personal profiles are allocated to the

user, the or each of the said resources has a code, and at least one

5   said code is matched with a predetermined said profile thereby to

effect or influence contact between the or each of the said resources

and the or each of the said users associated with the said matched

code and profile.

2.   A method according to claim 1 wherein the network is the Internet.

10   3.   A method according to claim 1 or 2 wherein each user profile

contains exclusively data of a general nature and does not contain

data capable of uniquely identifying that user.

4.   A method according to any one of claims 1-3 wherein each user

profile is stored only in network equipment under the control of that

15   user.

5.   A method according to claim 4 wherein each user profile is stored in

that user's own local equipment used for access to the network.

6.   A method according to claim 5 wherein the local equipment

comprises a PC.

20   7.   A method according to any one of claims 1 to 6 wherein each user

profile is established using software requiring the user to respond to

queries.

-24-

8. A method according to any one of claims 1 to 7 wherein each user profile comprises a data set made up of separate data nuggets representing respectively different personal attributes of the user.

9. A method according to claim 8 wherein the nuggets are grouped as sub-sets of characteristics of the user.

10. A method according to claim 9 wherein there are 32 characteristics.

11. A method according to claim 10 wherein each characteristics has a group of 16 nuggets.

12. A method according to any one of claims 1 to 11 wherein a matching intermediately is used for matching profiles and codes.

13. A method according to claim 2 or any one of claims 3 to 13 when dependent on claim 2 wherein the resources are web sites.

14. A method according to claim 13 when dependent on claim 12 wherein the matching intermediary is an Internet web site.

15. A method according to claim 14 wherein the matching Internet web site is a search engine web site.

16. A method according to claim 15 wherein the resource web sites have the codes for matching with the profiles embedded therein so as to be indexed by Internet search engines.

17. A method according to any one of claims 13 to 16 wherein the result of the matching of a user's profile and a resource web site code is such as to direct the user to the resource web site.
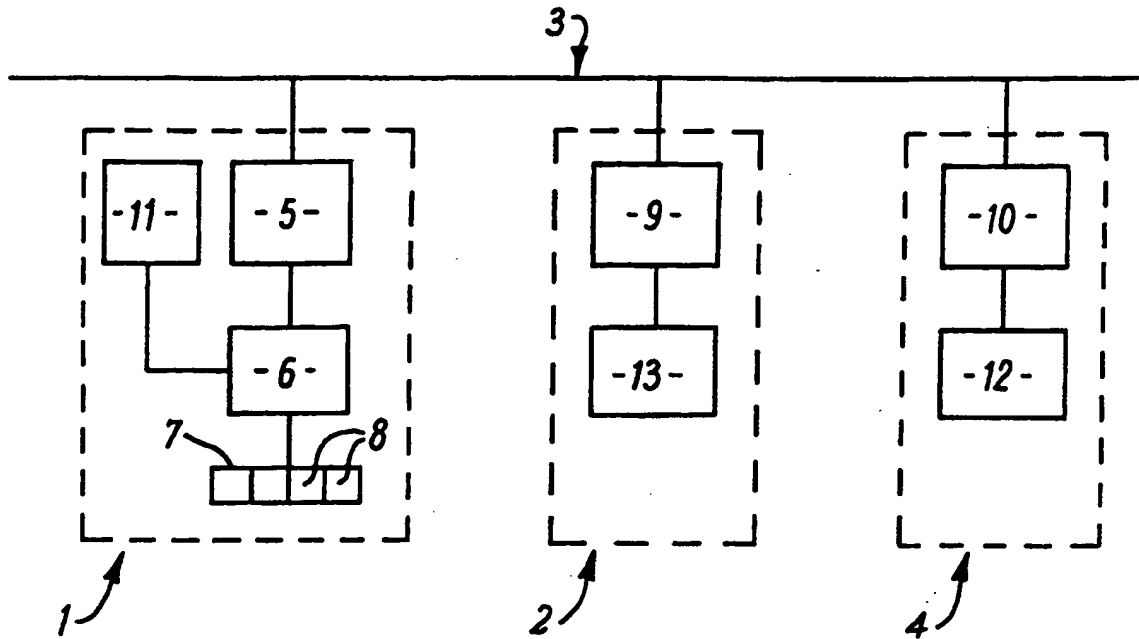
-25-

18.   A method according to any one of claims 13 to 17 wherein the result

of the matching of a user's profile and a resource web site code is

such as to influence information presented to the user at the resource

web site.

5   19.   A method according to any one of claims 1 to 18 wherein the

matching of a user's profile and a resource code is effected using a

mask whereby a match is achieved when mask parameters are met

to a predetermined extent or within a predetermined range.

20.   A method according to claim 19 wherein the matching is effected in

10   relation to correlation of the user's profile with codes hierarchically

divided within catalogue entries whereby matching is aborted on

occurrence of a higher level matching failure within the hierarchy.

21.   A method according to claim 18, or any claim dependent thereon,

when dependent on claim 14 wherein the matching Internet web site

15   acts to effect said influence.

22.   A method according to claim 21 wherein the influence comprises

construction and presentation of a customised web page.

23.   A method according to claim 22 wherein the customised web page

is presented within a frame at the matching Internet web site.

20   24.   A network system for use in performing the method of any one of

claims 1 to 23 comprising a network, resource servers connected to

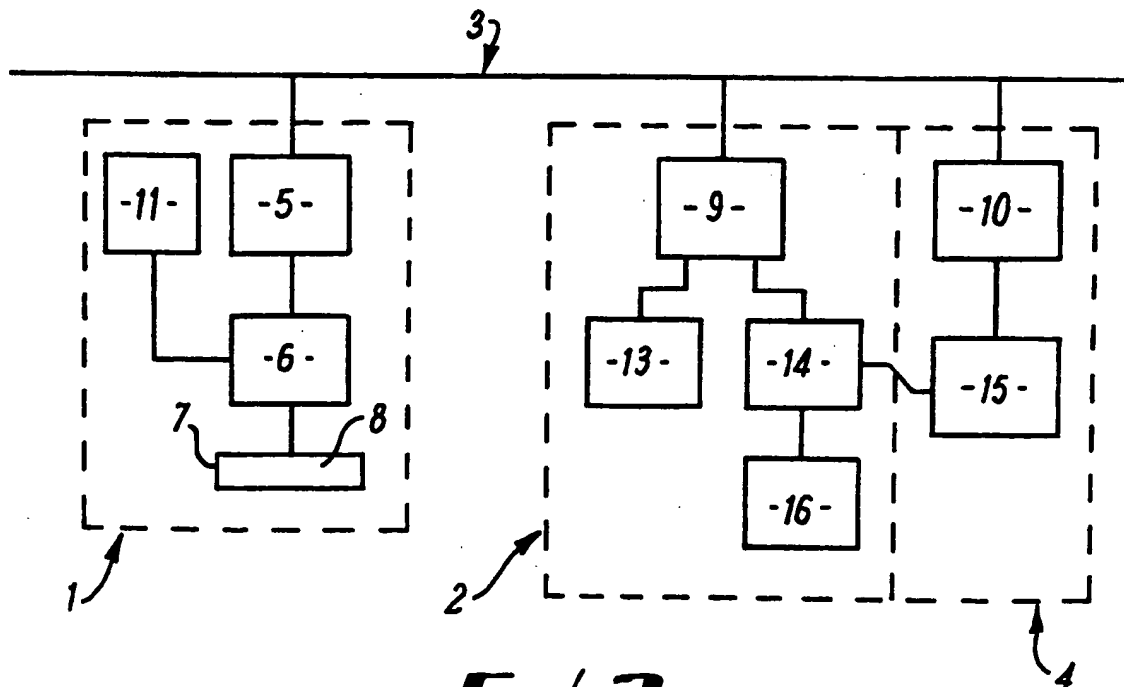the network, local user network equipment to provide access to the

-26-

network for users, and at least one intermediary server connected to

the network and operable to match user profiles with resource server

codes.

25.   A network system according to claim 24 wherein the network is the

5   Internet and the intermediate server is a search engine.

Fig.1

Fig.2